

CLAIMS

1. A polymer formed from monomers comprising ethylene; $\text{CH}_2=\text{CHQ}$ wherein Q is $\text{C}_1\text{-C}_8$ alkyl; and optionally a non-conjugated polyene; wherein

a) ethylene is present in an amount of from about 67% to about 75% by weight;

b) the non-conjugated polyene is present in an amount of from about 0% to about 30% by weight; and

c) $\text{CH}_2=\text{CHQ}$ is present in an amount of from about 15%

10 to about 40% by weight;
said polymer having a viscosity average molecular weight
of from about 4,000 to about 30,000.

2. The polymer of claim 1, wherein the non-conjugated polyene is selected from the group consisting of 5-ethylidene-2-norbornene, 1,4-hexadiene and dicyclopentadiene.

3. The polymer of claim 2, wherein Q is methyl.

4. The polymer of claim 3, wherein the polyene component is present in an amount of from about 1% to about 20% by weight.

5. The polymer of claim 4, wherein the polyene component is present in an amount of from about 3% to about 15% by weight.

6. The polymer of claim 1, wherein the $\text{CH}_2=\text{CHQ}$ component is present in an amount of from about 20% to about 35% by weight.

7. The polymer of claim 6, wherein the $\text{CH}_2=\text{CHQ}$ component is present in an amount of from about 22% to about 30% by weight.

8. The polymer of claim 1, wherein the polymer has a viscosity average molecular weight of from about 5,000 to about 10,000.

5 9. The polymer of claim 1, wherein the polymer yields about 10 mm or less in a needle penetration test.

10 10. The polymer of claim 1, wherein said polymer further comprises a reinforcing agent.

11. The polymer of claim 10, wherein the reinforcing agent is selected from the group consisting of aramid fibers, cotton, polyesters, fiberglass, and mixtures thereof.

12. The polymer of claim 11, wherein the reinforcing agent comprises aramid fibers.

13. The polymer of claim 10, wherein the reinforcing agent is present in an amount of up to about 70% by weight.

14. A composition which comprises:
a) a polymer formed from monomers comprising ethylene; $\text{CH}_2=\text{CHQ}$ wherein Q is $\text{C}_1\text{-C}_8$ alkyl; and optionally a non-conjugated polyene; wherein

i) ethylene is present in an amount of from about 67% to about 75% by weight;

ii) the polyene is present in an amount of from about 0% to about 30% by weight; and

iii) $\text{CH}_2=\text{CHQ}$ is present in an amount of from about 15% to about 40% by weight;

said polymer having a viscosity average molecular weight of from about 4,000 to about 30,000;

35 b) a reinforcing agent; and

Arched c) a high molecular weight polymer.

15. The composition of claim 14, wherein the non-conjugated polyene is selected from the group consisting
5 of 5-ethylidene-2-norbornene, 1,4-hexadiene and dicyclopentadiene.

16. The composition of claim 15, wherein Q is methyl.

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17. The composition of claim 16, wherein the polyene component is present in an amount of from about 1% to about 20% by weight.

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18. The composition of claim 17, wherein the polyene component is present in an amount of from about 3% to about 15% by weight.

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19. The composition of claim 14, wherein the $\text{CH}_2=\text{CHQ}$ component is present in an amount of from about 20% to about 35% by weight.

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20. The composition of claim 19, wherein the $\text{CH}_2=\text{CHQ}$ component is present in an amount of from about 22% to about 30% by weight.

21. The composition of claim 14, wherein the polymer of part a) has a viscosity average molecular weight of from about 5,000 to about 10,000.

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22. The composition of claim 14, wherein the polymer of part a) yields about 10 mm or less in a needle penetration test.

23. The composition of claim 14, wherein the reinforcing agent is selected from the group consisting of aramid fibers, cotton, polyesters, fiberglass, and mixtures thereof.

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(Nonbreak
process)

24. The composition of claim 23, wherein the reinforcing agent comprises aramid fibers.

10 25. The composition of claim 14, wherein the high molecular weight polymer is selected from the group consisting of natural rubber and synthetic rubber.

15 26. The composition of claim 25, wherein the synthetic rubber is selected from the group consisting of ethylene/alphaolefin/nonconjugated polyene (EPDM) rubbers, styrene/butadiene rubbers, acrylonitrile/butadiene (NBR) rubbers, polychloroprene and sulfur modified polychloroprene, and polybutadiene rubbers.

20 27. A moulded article made from the composition of claim 14.

25 28. The article of claim 27, wherein the article is selected from the group consisting of a v-belt, a timing belt, a conveyor belt, a drive belt, a hose, a seal, a diaphragm, a cable and a roll cover.

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